

What is claimed is:

1. A waveform generating method comprising the steps of:

5 storing a plurality of partial waveforms in a partial waveform memory;

storing property information on respective ones of the partial waveforms stored in the partial waveform memory, in a property information memory;

10 retrieving the property information memory according to inputted sounding control information to read out a partial waveform having property information corresponding to the sounding control information;

15 processing the readout partial waveform according to the property information and the sounding control information; and

generating a waveform corresponding to the sounding control information.

20 2. A performance data processing method comprising the steps of:

storing property information on respective ones of a plurality of partial waveforms in a property information memory;

25 comparing characteristics of respective ones of notes included in performance data with the property information stored in the property information memory to detect an optimum partial waveform for a characteristic of each of the notes;

30 assigning designation data for designating the detected partial waveform to each of the notes; and

storing performance data having the designation data assigned thereto.

35 3. A waveform generating method for use in reproducing the performance data having the designation data assigned thereto stored by a performance data

processing method according to claim 2, comprising the steps of:

storing a plurality of partial waveforms in a partial waveform memory;

- 5 reading out a partial waveform from the partial waveform memory according to the designation data assigned to each of the notes to be reproduced when reproducing the notes having the designation data assigned thereto according to the performance data; and
- 10 generating a waveform corresponding to each of the notes based upon the read out partial waveform.

4. A waveform generating method comprising the steps of:

- 15 storing performance information corresponding to real-time performance; and
- generating accompanying tones by automatic performance or automatic accompaniment according to a tempo clock, reproducing performance information according to the tempo clock, and generating waveforms
- 20 corresponding to performance events performed in real time to accompaniment of the generated accompanying tones, according to the performance events and the reproduced performance information.

5. A waveform selection apparatus comprising:

- 25 a partial waveform memory that stores a plurality of partial waveforms;

- a database that stores property data representing characteristics of two tones corresponding to each of the partial waveforms stored in said partial waveform memory
- 30 and consisting of a tone corresponding to each of the partial waveforms and a preceding tone; and

- a retrieving device that retrieves said database according to characteristic data of two tones consisting of an inputted present tone to be generated by
- 35 performance and an inputted preceding tone to be

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generated by performance before the inputted present tone to extract at least one partial waveform having property data close to the characteristic data of the inputted two tones as a partial waveform for sounding the inputted present tone to be generated by performance.

6. A waveform selection apparatus comprising:

a partial waveform memory that stores a plurality of partial waveforms;

a database that stores property data representing characteristics of two tones corresponding to each of the partial waveforms stored in said partial waveform memory and consisting of a tone corresponding to each of the partial waveforms and a following tone; and

a retrieving device that retrieves said database according to characteristic data of two tones consisting of an inputted present tone to be generated by performance and a following tone to be inputted and generated by performance before the inputted present tone to extract at least one partial waveform having property data close to the characteristic data of the inputted present tone and the following tone to be inputted as a partial waveform for sounding the inputted present tone to be generated by performance.

7. A waveform data recording apparatus comprising:

an automatic performing device that reproduces performance data relating to phrases to be recorded;

a waveform recording device that records phrase waveforms representing tones generated by performance based on tones generated by reproduction of the performance data by said automatic performing device; and

a waveform data processing device that extracts data of the phrase waveforms recorded by said waveform recording device according to characteristic information on notes of the performance data to divide the data of the phrase waveforms into partial waveform data

corresponding to respective ones of the notes.

8. A waveform data recording apparatus according to claim 7, wherein said waveform recording device records the phrase waveforms in synchronism with performance timing of said automatic performing device.

9. A waveform data recording apparatus according to claim 7, wherein said waveform data processing device assigns the characteristic information on the notes corresponding to the partial waveform data as property information to the partial waveform data.

10. A waveform data recording apparatus according to claim 9, comprising a device that creates a tone color set from a partial waveform pool in which selected partial waveform data selected from the partial waveform data is pooled, and a partial waveform management database composed of the property information assigned to respective ones of the selected partial waveform data pooled in the partial waveform pool.

11. A recorded waveform data reproducing apparatus comprising:

a storage device that stores a tone color set from a partial waveform pool in which selected partial waveform data selected from the partial waveform data is pooled, and a partial waveform management database composed of property information assigned to respective ones of the selected partial waveform data pooled in the partial waveform pool;

a detecting device that retrieves the partial waveform management database in the tone color set according to characteristic information on respective notes in performance data to detect optimum partial waveform data for each of the notes from the partial waveform pool;

a designation data inserting device that embeds designation data for designating the optimum partial

waveform data detected by said detecting device to each of the notes into the performance data; and

a reproducing device that automatically reproduces the performance data in which the designation data is  
5 embedded by said designation data inserting device, according to the optimum partial waveform data designated by the designation data.

12. A recorded waveform data reproducing apparatus comprising:

10 a storage device that stores a tone color set from a partial waveform pool in which selected partial waveform data selected from the partial waveform data is pooled, and a partial waveform management database composed of property information assigned to respective ones of the  
15 selected partial waveform data pooled in the partial waveform pool;

a detecting device that retrieves the partial waveform management database in the tone color set according to information on respective performance event  
20 data that have occurred, to detect optimum partial waveform data for each of the performance event data from the partial waveform pool; and

a reproducing device that reproduces the performance event data according to the optimum partial waveform data  
25 detected by said detecting device.

13. A recorded waveform data reproducing apparatus comprising:

a storage device that stores a tone color set from a partial waveform pool in which selected partial waveform  
30 data selected from the partial waveform data is pooled, and a partial waveform management database composed of property information assigned to respective ones of the selected partial waveform data pooled in the partial waveform pool;

35 a detecting device that retrieves the partial

waveform management database in the tone color set according to characteristic information on respective notes in performance data read in advance to detect optimum partial waveform data for each of the notes from the partial waveform pool; and

- 5 a reproducing device that is responsive to occurrence of performance event data corresponding to respective ones of the notes in the performance data, for reproducing performance tones corresponding to the
- 10 respective ones of the notes according to the optimum partial waveform data detected by said detecting device.

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